

USPTO Customer No. 25280

Case 5675

REMARKSRejection under 35 USC 103(a)

Claims 1 – 12, 16 – 20, and 24 – 28 are rejected under 35 USC 103(a) as being unpatentable over Symons (US Patent 5,549,863) in view of Taylor et al. (US Patent 5,766,724).

The Examiner's position is essentially as follows:

The primary reference (Symons) teaches the basic claimed invention including a reinforced cement panel comprising a core of cementitious material with a reinforcing fabric adjacent thereto. The reference fails to expressly teach nucleated polypropylene fibers.

The secondary reference to Taylor et al., however, teaches that it is known in the art to facilitate reinforced cement with nucleated polypropylene fibers.

It would have been obvious to combine the teachings of Taylor et al. and facilitate the primary reference with such similarly disposed fiber material, in the absence of unexpected results, and such a combination would result in the claimed reinforced cement panel.

The Symons reference is directed to a fiber-reinforced composite board made of thermosetting resin material. The Symons reference does not teach the use of a core of cementitious material, but rather teach the use of a phenolic resin (that may be polymerized at room temperature), a liquid polyester resin, or room temperature-curing

USPTO Customer No. 25280

Case 5675

acrylic and methacrylic acid esters and methyl methacrylates. The thermosetting materials used by Symons are provided to create a composite board that is an alternative to fiber reinforced cement boards, which are the subject of Applicants' disclosure. (See Col. 1, lines 10-21 of Symons.)

Further, the reinforcing material used in the reference may be a natural fiber material (such as kraft paper sheeting or wood pulp sheeting with a corrugated core) or a fibrous reinforcing material (such as chopped strand fiberglass mat, woven fiberglass rovings, or nonwoven synthetic polymer fiber, or, alternatively, short reinforcing fibers of synthetic or natural material). The reference does not teach the use, or advantages, of nucleated polypropylene fibers for reinforcement purposes, much less the use of such nucleated polypropylene fibers for creation of boards with a core of cementitious material.

Accordingly, the Symons reference has been combined with Taylor et al., which the Examiner submits teaches the use of nucleated polypropylene to facilitate reinforced cement. Taylor et al. is directed to a method for thermoshaping composite laminate bars to create a thermoplastic orthopedic brace. The textile components are created by weaving a plurality of tapes into sheet fabric, by weaving commingled yarns containing thermoplastic resin and reinforcing fibers into a fabric, or by laminating under heat and pressure woven or nonwoven fabric webs of reinforcing fibers. (See Col. 7, lines 6 – 40.) Applicants note that the fabric described in the '724 reference does not necessarily perform a reinforcing function:

"The fabric layer of this invention does not necessarily need to contribute to the mechanical properties of the panel, therefore it does not have to, but may, contain high strength fibers, such as those types of fibers reinforcing the thermoplastic composite core." (Col. 7, l. 66 *et seq.*)

USPTO Customer No. 25280

Case 5675

After careful reading and a computerized word search, Applicants have not found the term "nucleated" in the Tailor et al. reference, as suggested by the Examiner. Therefore, it is unclear how the Tailor et al. reference can be used to overcome the shortcomings of the Symons reference.

Applicants' independent Claims 1, 16, and 24 each require (a) a core of cementitious material and (b) the presence of nucleated polypropylene fibers in at least some of the yarns of the reinforcing material. However, the combination of Symons and Tailor et al. does not teach the limitations of Applicants' claims. In fact, the combination does not teach either of the limitations of Applicants' claims. Accordingly, Applicants submit that the rejection is improper and should be withdrawn.

Claims 2 – 12, 17 – 20, and 25 – 28 depend, either directly or indirectly, from Claims 1, 16, and 24. The same arguments apply as above—that is, that the combination of references fails to teach the use of nucleated polypropylene fibers in the production of a reinforced cement panel. For this reason, Applicants respectfully request the withdrawal of the rejection of these claims on this basis.

* * *

Claims 13 – 15, 21 – 23, and 29 – 31 are rejected under 35 USC 103(a) as being unpatentable over Symons (US Patent 5,549,863) in view of Gerster et al. (US Patent 6,586,606).

USPTO Customer No. 25280

Case 5675

The shortcomings of Symons with respect to the present application have been discussed above. Symons fails to teach the creation of a cementitious board and further fails to teach the use of nucleated polypropylene for reinforcement of the board.

Gerster et al. teach a process for producing chemical compounds useful for stabilizing organic materials against oxidative, thermal or light-induced degradation. The passage cited in the Office Action (col. 38, lines 4-61) recites a list of additives for the inventive composition.

From Applicants' understanding, the combination of Gerster et al. with Symons fails to teach all of the limitation of the present claims. In our opinion, the teaching of additives for a stabilizing compound, when combined with a composite board made of thermosetting resin, is insufficient to reject claims to a board made of cementitious material that is reinforced with nucleated polypropylene fibers.

Symons, as discussed above, does not indicate a need for the strength provided by nucleated polypropylene fibers. Therefore, there would be no motivation based on the teachings of Symons to look for agents to increase the strength of the reinforcement. Further, it seems unlikely to Applicants that someone looking to reinforce a cementitious board would consider art in Class 549, which is directed to Organic Compounds.

For these reasons, Applicants believe the rejection of Claims 13 – 15, 21 – 23, and 29 – 31 over Symons in view of Gerster et al. is improper. Applicants respectfully request the withdrawal of such rejection.

USPTO Customer No. 25280

Case 5675

CONCLUSION

For the reasons set forth above, it is respectfully submitted that the rejections should be withdrawn and that all claims now stand in condition for allowance.

Should any issues remain after consideration of this Amendment and accompanying Remarks, the Examiner is invited and encouraged to telephone the undersigned in the hope that any such issue may be promptly and satisfactorily resolved.

This response is accompanied by a Petition for Extension of Time (and duplicate thereof). In the event that there are additional fees associated with the submission of these papers (including extension of time fees), authorization is hereby provided to withdraw such fees from Deposit Account No. 04-0500.

Date: January 10, 2005

Legal Department
Milliken & Company, M-495
920 Milliken Road
Post Office Box 1926
Spartanburg, SC 29304

Respectfully submitted,



Charlotte C. Wilson
Agent for Applicants
Registration No. 45,224
Tel. (864) 503-2194